



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Customer: NW Natural Goods
Product identity: HEMP - EB 0099
Client/Metric ID: .
Laboratory ID: 23-013431-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.219		mg/4g		CBD-Total per Serving Size 25.4 mg/4g
CBD per 4g	25.4		mg/4g		
CBG per 4g	0.716		mg/4g		THC-Total per Serving Size <LOQ
CBN per 4g	4.68		mg/4g		(Reported in milligrams per serving)

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

Analyte	Result (mg/kg)	Limits (mg/kg)	Status
Multi-Residue Pesticide Profile	< LOQ for all analytes		

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Customer: NW Natural Goods

Product identity: HEMP - EB 0099

Client/Metric ID: .

Sample Date:

Laboratory ID: 23-013431-0001

Evidence of Cooling: No

Temp: 15.4

Relinquished by: ramos

Serving Size #1: 4 g

Sample Results

Potency per 4g		Method: J AOAC 2015 V98-6 (mod) ^b		Units mg/se Batch: 2312958		Analyze: 11/17/23 9:18:00 PM
Analyte	Result	Limits	Units	LOQ	Notes	
CBC per 4g	0.219		mg/4g	0.128		
CBC-A per 4g	< LOQ		mg/4g	0.128		
CBC-Total per 4g	< LOQ		mg/4g	0.240		
CBD per 4g	25.4		mg/4g	0.128		
CBD-A per 4g	< LOQ		mg/4g	0.128		
CBD-Total per 4g	25.4		mg/4g	0.240		
CBDV per 4g	< LOQ		mg/4g	0.128		
CBDV-A per 4g	< LOQ		mg/4g	0.128		
CBDV-Total per 4g	< LOQ		mg/4g	0.239		
CBE per 4g	< LOQ		mg/4g	0.128		
CBG per 4g	0.716		mg/4g	0.128		
CBG-A per 4g	< LOQ		mg/4g	0.128		
CBG-Total per 4g	0.716		mg/4g	0.239		
CBL per 4g	< LOQ		mg/4g	0.128		
CBL-A per 4g	< LOQ		mg/4g	0.128		
CBL-Total per 4g	< LOQ		mg/4g	0.240		
CBN per 4g	4.68		mg/4g	0.128		
CBT per 4g	< LOQ		mg/4g	0.128		
Δ8-THCV per 4g	< LOQ		mg/4g	0.128		
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.128		
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.128		
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.256		
Δ8-THC per 4g	< LOQ		mg/4g	0.128		
Δ9-THC per 4g	< LOQ		mg/4g	0.128		
delta-9-THCP per 4g	< LOQ		mg/4g	0.128		
exo-THC per 4g	< LOQ		mg/4g	0.128		
THC-A per 4g	< LOQ		mg/4g	0.128		
THC-Total per 4g	< LOQ		mg/4g	0.240		
THCV per 4g	< LOQ		mg/4g	0.128		
THCV-A per 4g	< LOQ		mg/4g	0.128		
THCV-Total per 4g	< LOQ		mg/4g	0.240		
Total Cannabinoids per 4g	31.0		mg/4g			

www.columbialaboratories.com
 Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

Testing in accordance with: OAR 333-007-0430



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2312798	11/17/23 AOAC 991.14 (Petrifilm) ^P		
Total Coliforms	< LOQ		cfu/g	10	2312798	11/17/23 AOAC 991.14 (Petrifilm) ^P		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2312799	11/18/23 AOAC 2014.05 (RAPID) ^P		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2312799	11/18/23 AOAC 2014.05 (RAPID) ^P		

Solvents Method: Residual Solvents by GC/MS^P Units µg/g Batch 2312908 Analyze 11/17/23 01:43 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass	
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane (Isopentane)	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethyl butane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200		
2,3-Dimethyl butane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0		
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass	
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	5000	400	pass	
Cyclohexane	< LOQ	3880	200	pass		Ethyl acetate	< LOQ	5000	200	pass	
Ethyl benzene	< LOQ		200			Ethyl ether	< LOQ	5000	200	pass	
Ethylene glycol	< LOQ	620	200	pass		Ethylene oxide	< LOQ	50.0	20.0	pass	
Hexanes (sum)	< LOQ	290	150	pass		Isopropyl acetate	< LOQ	5000	200	pass	
Isopropyl benzene (Cumene)	< LOQ	70.0	30.0	pass		m,p-Xylene	< LOQ		200		
Methanol	< LOQ	3000	200	pass		Methylene chloride	< LOQ	600	60.0	pass	
Methylpropane (Isobutane)	< LOQ		200			n-Butane	< LOQ		200		
n-Heptane	< LOQ	5000	200	pass		n-Hexane	< LOQ		30.0		
n-Pentane	< LOQ		200			o-Xylene	< LOQ		200		
Pentanes (sum)	< LOQ	5000	600	pass		Propane	< LOQ	5000	200	pass	
Tetrahydrofuran	< LOQ	720	100	pass		Toluene	< LOQ	890	100	pass	
Total Xylenes	< LOQ		400			Total Xylenes and Ethyl benzene	< LOQ	2170	600	pass	

Pesticides Method: AOAC 2007.01 & EN 15662 (mod)^P Units mg/kg Batch 2312963 Analyze 11/20/23 02:47 PM

Analyte	Result	Limits	Status	Notes
Multi-Residue Pesticide Profile	< LOQ for all analytes			



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Arsenic*	< LOQ	0.200	mg/kg	0.0193	2312919	11/17/23 AOAC 2013.06 (mod.) ^p	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0193	2312919	11/17/23 AOAC 2013.06 (mod.) ^p	pass	
Lead*	< LOQ	0.500	mg/kg	0.0193	2312919	11/17/23 AOAC 2013.06 (mod.) ^p	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00966	2312919	11/17/23 AOAC 2013.06 (mod.) ^p	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	19.1		g/100g	0.10	2312882	11/16/23 AOAC 925.10 (mod.) ^p		
Water Activity	0.689		Aw	0.030	2312819	11/15/23 AOAC 978.18 ^p		



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220, CCR title 16-division 42. BCC-section 5723

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

^p = ISO/IEC 17025:2017 accredited method.

[¥] = TNI accredited analyte.

Units of Measure

cfu/g = Colony forming units per gram

g = g

g/100g = Grams per 100 Grams

µg/g = Microgram per gram

mg/kg = Milligram per kilogram = parts per million (ppm)

mg/4g = Milligram per 4g

% = Percentage of sample

Aw = Water Activity

% wt = µg/g divided by 10,000

Approved Signatory

Derrick Tanner
General Manager



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49



Cannabis Mult-Residue Profile Limits of Quantitation

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Abamectin	0.100	Clethodim	0.050	ndrin	0.100
Acephala	0.100	Clethodim Sulfoxide	0.050	PN	0.050
Acequinocyl	0.100	Clethodim Sulfoxide	0.050	PTC	0.100
Aceamiprid	0.020	Clofentazine	0.020	s-envalera e/ envalera e	0.200
Aceochlor	0.100	Clomazone	0.020	aconazole	0.100
Acrinathrin	0.100	Clofentazine	0.200	halaluralin	0.100
Alachlor	0.100	Coumaphos	0.050	hioencarb	0.050
Aldicarb	0.100	Croxyphos	0.020	hion	0.200
Aldicarb sulfoxide	0.100	Cyanazine	0.020	hirimol	0.100
Aldoxycarb (Aldicarb-sulfoxide)	0.100	Cyanocephos	0.020	hoimesa e	0.050
Aldrin	0.100	Cyaniliprole	0.050	hoprophos	0.020
Ametoctradin	0.020	Cyazofluprid	0.020	o-enprox	0.020
Ametoctradin	0.500	Cyfluthrin	0.100	oxazole	0.020
Aspersion	0.100	Cyfluthrin	0.200	ridiazole	0.100
Asulam	0.100	Cyhalothrin, lambda	0.200	rimos	0.020
Azinphosmethyl	0.100	Cymoxanil	0.050	amoxadone	0.200
Azinphosmethyl	0.100	Cypermethrin	0.200	amphur	0.100
Azinphosmethyl	0.020	Cyprothrinil	0.100	enamidon	0.020
Azinphosmethyl	0.020	Dacifluthrin	0.100	enamiphos	0.020
Azoxystrobin	0.020	Daminozide	0.100	enamiphos sulfoxide	0.020
Benalaxyl	0.020	DCPMU	0.050	enamiphos sulfoxide	0.020
Bendiocarb	0.020	DDD, o,p'-	0.100	enazaquin	0.100
Benluralin	0.100	DDD, p,p'-	0.100	enbutaconazole	0.100
Benoxacor	0.050	DD, o,p'-	0.100	enchlorphos	0.100
Bensulide	0.050	DD, p,p'-	0.100	enchlorphos-oxon	0.100
Beta-cyfluthrin isomer	0.100	DDT, o,p'-	0.100	enhexamid	0.100
Beta-cyfluthrin isomer	0.100	DDT, p,p'-	0.100	enirohion	0.100
Beta-cyfluthrin isomer	0.500	D (Tribuox)	0.100	enobucarb	0.050
Benazoxypyr	0.020	Deltamethrin	0.100	enoxyacarb	0.020
Benazoxypyr	0.020	Desmedipham	0.100	enpropaenol	0.050
Boscalid	0.020	Diallate	0.100	enpyroximate	0.020
Bromophosmethyl	0.100	Diazinon	0.020	enson	0.100
Bromophosmethyl	0.200	Diazoxon	0.100	ensulohion	0.020
Bromopropylate	0.100	Dichlobenil	0.100	ensulohion oxon	0.020
Bromuconazole	0.100	Dichlofuanid	0.100	ensulohion sulfoxide	0.100
Bupirimate	0.020	Dichlorvos	0.100	Fensulfthion-oxon-sulfone	0.020
Buprofezin	0.050	Diclobutylazole	0.050	enion	0.050
Buthyachlor	0.500	Dicozol	0.100	enion oxon	0.020
Buthyralin	0.200	Dicrotophos	0.050	enion oxon sulfoxide	0.100
Buthyrylate	0.100	Dieldrin	0.100	enion sulfoxide	0.050
Cadusafos	0.020	Diehoencarb	0.020	enuron	0.020
Captafen	1.000	Diehoenolamide (D-T)	0.050	ipronil	0.100
Carbaryl	0.050	Diethofenathiazole	0.100	lonicamid	0.100
Carbendazim	0.100	Dimehenamid	0.050	luchloralin	0.100
Carbofuran	0.020	Dimehoate	0.050	lucyhrinate	0.100
Carbophenothion	0.200	Dimehomorph	0.050	ludioxonil	0.200
Carboxin	0.020	Diniconazole	0.200	luenace	0.020
Carfenthiothion	0.100	Dinofenpropanil	0.200	lumioxazin	0.100
Chloraniliprole	0.020	Dioxaenol	0.100	luomeuron	0.020
Chlordane, cis-	0.200	Diphenamid	0.020	luopicolide	0.050
Chlordane, trans-	0.200	Diphenylamine	0.100	luopyram	0.020
Chloraniliprole	0.500	Disulfoton	0.100	luoxastrobin	0.050
Chloraniliprole	0.200	Disulfoton sulfoxide	0.100	lupyradiuron	0.020
Chloraniliprole	0.050	Disulfoton sulfoxide	0.100	luridone	0.100
Chloraniliprole	0.100	Diuron	0.050	lusilazole	0.020
Chloraniliprole	0.200	dienecephos	0.050	luolanil	0.020
Chloraniliprole	0.050	ndosulalan alpha	0.200	luriaol	0.020
Chloraniliprole	0.200	ndosulalan beta	0.200	lualinate, au-	0.100
Chloraniliprole	1.000	ndosulalan sulfate	0.100	luxaproxad	0.020



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49



Cannab s Mu t -Res due Prof e, L m ts of Quant tat on

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
omesa en	0.100	Mexacarba e	0.020	Propamocarb	0.050
ono os	0.100	MGK 264	0.020	Propanil	0.050
orchlor enuron	0.050	Mirex	0.100	Propargi e	0.050
orme ana e	0.050	Molina e	0.050	Propazine	0.020
ura hiocarb	0.020	Monocro ophos	0.100	Prope amphos	0.050
ep achlor	0.100	Monolinuron	0.020	Propham	0.050
ep achlor epoxide	0.100	Myclobu anil	0.050	Propiconazole	0.050
ep enophos	0.100	Naled	0.100	Propoxur	0.050
exachlorobenzene	0.100	Napropamide	0.050	Propoxycarbazone Na	0.050
exaconazole	0.100	Neburon	0.020	Propyzamide	0.050
exazinone	0.100	Ni rapyrin	0.100	Pro hio os	0.100
exy hiazox	0.020	Nor lurazon	0.050	Pyraclos robin	0.020
mazalil	0.100	Ome hoa e	0.100	Pyrazophos	0.050
midacloprid	0.100	O-Phenylphenol	0.100	Pyre hrins	0.050
ndazi lam	0.020	Oxadixyl	0.100	Pyridaben	0.020
ndoxacarb	0.020	Oxamyl	0.100	Pyrida ol	0.100
proben os	0.100	Oxamyl-oxime	0.100	Pyrida e	0.020
prodione	0.100	Oxychlorthane	0.100	Pyrima hanil	0.050
sobenzan	0.100	Oxydeme on-Me hyl	0.100	Pyriproxi en	0.020
socarbophos	0.500	Oxy hioquinox	0.200	Pyroxasul one	0.020
sodrin	0.100	Paclobu razol	0.050	Pyroxulam	0.020
so enphos	0.050	Paraaxon-e hyl	0.020	Quinalphos	0.050
so enphos-me hyl	0.020	Paraaxon me hyl	0.100	Quinoxy en	0.050
so enphos oxon	0.050	Para hion e hyl	0.100	Quin ozene (PCNB)	0.200
soproc carb	0.020	Para hion me hyl	0.200	Resme hrin	0.050
sopropalin	0.200	Penconazole	0.050	Ro enone	0.050
sopro hiolane	0.050	Pendime halin	0.050	S421	0.100
sopro uron	0.050	Pen lu en	0.020	Simazine	0.100
soxaben	0.050	Pen achloroaniline	0.100	Sime ryn	0.200
soxa lu ole	0.050	Pen achloroanisole	0.100	Spine oram	0.020
Kresoxim-me hyl	0.050	Pen achlorobenzene (PCB)	0.100	Spinosad	0.050
ac o en	0.500	Pentachlorothioanisole (PCTA)	0.100	Spirodiclo en	0.100
enacil	0.100	Pen hiopyrad	0.020	Spiromesi en	0.050
indane (gamma B C)	0.100	Perme hrin	0.050	Spiro e rama	0.050
inuron	0.020	Per hane	0.100	Spiroxamine	0.020
Malaaxon	0.050	Phenmedipham	0.050	Sul o ep	0.050
Mala hion	0.050	Phen hoa e	0.050	Sul oxa lor	0.050
Mandipropamid	0.020	Phora e	0.050	Sulpro os	0.020
Mecarbam	0.020	Phora e Sul one	0.050	Tebuconazole	0.100
Mepanipyrim	0.050	Phora e Sul oxide	0.050	Tebu enozide	0.020
Merphos	0.500	Phosalone	0.050	Tebu hiuron	0.020
Me alaxyl	0.050	Phosme	0.100	Tecnazene	0.100
Me aldehyde	0.050	Phosphamidon	0.050	Te lu hrin	0.100
Me conazole	0.100	Phoxim	0.050	Terbu os	0.020
Me hacri os	0.100	Pinoxaden	0.020	Terbu os sul one	0.050
Me hamidophos	0.050	Piperonyl bu oxide	0.050	Terbu os sul oxide	0.050
Me hida hion	0.050	Pirimicarb	0.020	Terbu hylazine	0.020
Me hiocarb	0.050	Pirimiphos-me hyl	0.050	Terbu ryn	0.020
Me hiocarb sul one	0.100	Pirimiphos-e hyl	0.020	Te rachlorvinphos	0.050
Me hiocarb sul oxide	0.100	Pralle hrin	0.100	Te raconazole	0.050
Me homyl	0.100	Prochloraz	0.020	Te radi on	0.200
Me hoxychlor	0.100	Procyimidone	0.100	Te rame hrin	0.050
Me hoxy enozide	0.020	Pro eno os	0.100	Te rasul	0.100
Me obromuron	0.050	Pro luralin	0.100	Thiabendazole	0.100
Me olachlor	0.100	Promecarb	0.050	Thiabendazole, 5-hydroxy	0.100
Me olcarb	0.050	Prome on	0.100	Thiacloprid	0.050
Me ra enone	0.050	Prome ryn	0.020	Thiame hoxam	0.100
Me ribuzin	0.100	Propachlor	0.020	Thiobencarb	0.050
Mevinphos	0.100			Thiodicarb	0.050
				Thiophana e-me hyl	0.050



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49



Cannab s Mu t-Res due Prof e, L m ts of Quant tat on

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Tolclo os-me hyl	0.100	Triazophos	0.020	Tri loxys robin	0.020
Tri orin	0.100	Tolyl luanid	0.050	Tri iconazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vinclozolin	0.100
Triadime on	0.050	Tri lumizole	0.020	Zoxamide	0.020
Trialla e	0.100	Tri luralin	0.100		

LOQ= Limit of Quantitation, mg/kg

Factors affecting the LOQ include instrument sensitivity or a particular analyte, sample size, moisture content (percent solids) of the sample, effectiveness of the cleanup on the sample extract, and especially the type of sample matrix.



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



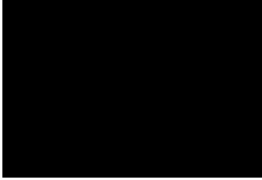
Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49



**Hemp & Cannabis
Chain of Custody**

**Northwest-Natural-
Goods-1699914967**

ORELAP ID: **OR1000028** ANAB ISO 17025 ID: **ATI508**

Contact Information Company: <u>Northwest Natural Goods</u> 		Project Details Turnaround Time: <u>5 Business Days / Rep. For Micro Testing / Standard</u> Sample Relinquishment Options: <u>Click-Up Request</u> Compliance: <u>Compliance</u> Project Name / ID: <u>HEMP-EB-0098</u> Cannabis Type (select if applicable): <u>Industrial</u>			Testing H0010 - Potency Cannabinoid Basic + Extended Profile F0020 - Fastfold - Multi-Residue Profile H0008 - Residual Solvents - CF H0013 - Heavy Metals Profile (As, Cd, Pb & Hg) M075 - Total Coliforms - EColi P003 - Yeast and Mold N150 - Moisture Loss on Drying N300 - Water Activity							
#	Sample Name Test	Material	Amount Provided	Reporting Unit	Serving Size							
1	HEMP-EB0098	Edible	20 g	mg/g & mg/serving	4 g	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
KRISTEN JOHNSON	11/13/2023	14:36	Temp., °C	BR	11/14/2023	10:13		No
BR	11/14/2023	10:54	15.4	BR	11/14/2023	11:49		No

Samples submitted to Columbia Laboratories with testing requirements constitute an agreement for service in accordance with the [current terms of service](#) associated with NSCOC. By signing Relinquished by you are agreeing to these terms.

Columbia Laboratories
12423 NE Whitaker Way
Portland, OR 97230

P: (503) 254-1794 | F: (503) 254-1462
[info@columbialaboratories.com](http://info.columbialaboratories.com)

Page 1 of 1
www.columbialaboratories.com



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
 Report Date: 11/21/2023
 ORELAP#: OR100028
 Purchase Order:
 Received: 11/14/23 11:49

Revision: 2 Document ID: 7087
 Legacy ID: CFL-E33Effective:

Laboratory Quality Control Results

Residual Solvents				Batch D: 2312908					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		568	584	µg/g	97.3	60 - 120	
Isobutane	ND	< 200		710	767	µg/g	92.6	60 - 120	
Butane	ND	< 200		699	782	µg/g	89.4	60 - 120	
2,2-Dimethylpropane	ND	< 200		902	939	µg/g	96.1	60 - 120	
Methanol	ND	< 200		1530	1600	µg/g	95.6	60 - 120	
Ethylene Oxide	ND	< 30		53.5	57.1	µg/g	93.7	60 - 120	
2-Methylbutane	ND	< 200		1510	1600	µg/g	94.4	60 - 120	
Pentane	ND	< 200		1480	1600	µg/g	92.5	60 - 120	
Ethanol	ND	< 200		1400	1600	µg/g	87.5	70 - 130	
Ethyl Ether	ND	< 200		1470	1600	µg/g	91.9	60 - 120	
2,2-Dimethylbutane	ND	< 30		149	161	µg/g	92.5	60 - 120	
Acetone	ND	< 200		1490	1600	µg/g	93.1	60 - 120	
2-Propanol	ND	< 200		1390	1600	µg/g	86.9	60 - 120	
Ethyl Formate	ND	< 500		1260	1600	µg/g	78.8	70 - 130	
Acetonitrile	ND	< 100		442	488	µg/g	90.6	60 - 120	
Methyl Acetate	ND	< 500		1480	1610	µg/g	91.9	70 - 130	
2,3-Dimethylbutane	ND	< 30		150	163	µg/g	92.0	60 - 120	
Dichloromethane	ND	< 60		404	488	µg/g	82.8	60 - 120	
2-Methylpentane	ND	< 30		122	161	µg/g	75.8	60 - 120	
MTBE	ND	< 500		1560	1650	µg/g	94.5	70 - 130	
3-Methylpentane	ND	< 30		138	162	µg/g	85.2	60 - 120	
Hexane	ND	< 30		141	161	µg/g	87.6	60 - 120	
1-Propanol	ND	< 500		1620	1620	µg/g	100.0	70 - 130	
Methyl ethyl ketone	ND	< 500		1500	1610	µg/g	93.2	70 - 130	
Ethyl acetate	ND	< 200		1410	1610	µg/g	87.6	60 - 120	
2-Butanol	ND	< 200		1250	1610	µg/g	77.6	60 - 120	
Tetrahydrofuran	ND	< 100		399	483	µg/g	82.6	60 - 120	
Cyclohexane	ND	< 200		1360	1600	µg/g	85.0	60 - 120	
2-methyl-1-propanol	ND	< 500		1390	1600	µg/g	86.9	70 - 130	
Benzene	ND	< 1		4.11	4.99	µg/g	82.4	60 - 120	
Isopropyl Acetate	ND	< 200		1380	1600	µg/g	86.3	60 - 120	
Heptane	ND	< 200		1370	1600	µg/g	85.6	60 - 120	
1-Butanol	ND	< 500		1430	1610	µg/g	88.8	70 - 130	
Propyl Acetate	ND	< 500		1510	1610	µg/g	93.8	70 - 130	
1,4-Dioxane	ND	< 100		351	480	µg/g	73.1	60 - 120	
2-Ethoxyethanol	ND	< 30		113	161	µg/g	70.2	60 - 120	
Methylisobutylketone	ND	< 500		1470	1610	µg/g	91.3	70 - 130	
3-Methyl-1-butanol	ND	< 500		1380	1610	µg/g	85.3	70 - 130	
Ethylene Glycol	ND	< 200		178	481	µg/g	37.0	60 - 120	Q6
Toluene	ND	< 100		352	483	µg/g	72.9	60 - 120	
Isobutyl Acetate	ND	< 500		1480	1610	µg/g	91.9	70 - 130	
1-Pentanol	ND	< 500		1410	1610	µg/g	87.6	70 - 130	
Butyl Acetate	ND	< 500		1400	1600	µg/g	87.5	70 - 130	
Ethylbenzene	ND	< 200		641	962	µg/g	66.6	60 - 120	
m,p-Xylene	ND	< 200		644	994	µg/g	64.8	60 - 120	
o-Xylene	ND	< 200		618	965	µg/g	64.0	60 - 120	
Cumene	ND	< 30		104	169	µg/g	61.5	60 - 120	
Anisole	ND	< 500		1200	1600	µg/g	75.0	70 - 130	
DMSO	ND	< 500		1020	1600	µg/g	63.8	70 - 130	Q6
1,2-dimethoxyethane	ND	< 50		157	163	µg/g	96.3	70 - 130	
Triethylamine	ND	< 500		1070	1600	µg/g	66.9	70 - 130	Q6
N,N-dimethylformamide	ND	< 150		372	482	µg/g	77.2	70 - 130	
N,N-dimethylacetamide	ND	< 150		399	483	µg/g	82.6	70 - 130	
Pyridine	ND	< 50		119	161	µg/g	73.9	70 - 130	
Silfolane	ND	< 50		93.6	163	µg/g	57.4	70 - 130	Q6
1,2-Dichloroethane	ND	< 1		0.859	1	µg/g	85.9	70 - 130	
Chloroform	ND	< 1		0.957	1	µg/g	95.7	70 - 130	
Trichloroethylene	ND	< 1		0.867	1	µg/g	86.7	70 - 130	
1,1-Dichloroethane	ND	< 1		0.953	1	µg/g	95.3	70 - 130	



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Revision: 2 Document ID: 7087
Legacy ID: CFL-E33Effective:

QC- Sample Duplicate		Sample ID: 23-013136-0002						
Analyte	Result	Org. Result	LOQ Units	RPD	Limits	Accept/ Fail	Notes	
Propane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Isobutane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Butane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2,2-Dimethylpropane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Methanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethylene Oxide	ND	ND	30 µg/g	0.0	< 20	Acceptable		
2-Methylbutane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Pentane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethyl Ether	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2,2-Dimethylbutane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Acetone	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-Propanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethyl Formate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Acetonitrile	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Methyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
2,3-Dimethylbutane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Dichloromethane	ND	ND	60 µg/g	0.0	< 20	Acceptable		
2-Methylpentane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
MTBE	ND	ND	500 µg/g	0.0	< 20	Acceptable		
3-Methylpentane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Hexane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
1-Propanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Methylethylketone	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethyl acetate	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-Butanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Tetrahydrofuran	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Cyclohexane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-methyl-1-propanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Benzene	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Isopropyl Acetate	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Heptane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
1-Butanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Propyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1,4-Dioxane	ND	ND	100 µg/g	0.0	< 20	Acceptable		
2-Ethoxyethanol	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Methylisobutylketone	ND	ND	500 µg/g	0.0	< 20	Acceptable		
3-Methyl-1-butanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethylene Glycol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Toluene	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Isobutyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1-Pentanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Butyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethylbenzene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
m,p-Xylene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
o-Xylene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Cumene	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Anisole	ND	ND	500 µg/g	0.0	< 20	Acceptable		
DMSO	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1,2-dimethoxyethane	ND	ND	50 µg/g	0.0	< 20	Acceptable		
Triethylamine	ND	ND	500 µg/g	0.0	< 20	Acceptable		
N,N-dimethylformamide	ND	ND	150 µg/g	0.0	< 20	Acceptable		
N,N-dimethylacetamide	ND	ND	150 µg/g	0.0	< 20	Acceptable		
Pyridine	ND	ND	50 µg/g	0.0	< 20	Acceptable		
Sulfolane	ND	ND	50 µg/g	0.0	< 20	Acceptable		
1,2-Dichloroethane	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Chloroform	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Trichloroethylene	ND	ND	1 µg/g	0.0	< 20	Acceptable		
1,1-Dichloroethane	ND	ND	1 µg/g	0.0	< 20	Acceptable		

Abbreviations

ND - None Detected at or above MRL
RPD - Relative Percent Difference
LOQ - Limit of Quantitation

Units of Measure:

µg/g - Microgram per gram or ppm



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Revision: 4 Document ID: 7148
Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V986 Batch ID: 2312958

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes	
CBDA	2	0.0329	0.0329	%	100	80.0 - 120	Acceptable		
CBDA	2	0.0324	0.0324	%	100	80.0 - 120	Acceptable		
CBE	2	0.0348	0.0349	%	99.6	80.0 - 120	Acceptable		
CBDA	1	0.0311	0.0311	%	100	90.0 - 110	Acceptable		
CBDA	1	0.0317	0.0313	%	101	80.0 - 120	Acceptable		
CBG	1	0.0334	0.0332	%	101	80.0 - 120	Acceptable		
CBG	1	0.0317	0.0319	%	99.6	90.0 - 110	Acceptable		
THCV	2	0.0330	0.0337	%	97.9	80.0 - 120	Acceptable		
deltaTHCV	2	0.0276	0.0271	%	102	80.0 - 120	Acceptable		
THCVA	2	0.0317	0.0317	%	100.0	80.0 - 120	Acceptable		
CBN	1	0.0335	0.0332	%	101	80.0 - 120	Acceptable		
exo-THC	2	0.0304	0.0308	%	98.8	80.0 - 120	Acceptable		
deltaTHC	1	0.0329	0.0320	%	103	90.0 - 110	Acceptable		
deltaTHC	1	0.0271	0.0277	%	97.9	90.0 - 110	Acceptable		
9SdeltaTHC	1	0.0328	0.0328	%	100	80.0 - 120	Acceptable		
CBL	2	0.0335	0.0351	%	95.4	80.0 - 120	Acceptable		
9SHHC	3	0.0294	0.0292	%	100	80.0 - 120	Acceptable		
9RdeltaTHC	1	0.0311	0.0314	%	99.2	80.0 - 120	Acceptable		
CBE	2	0.0340	0.0341	%	99.7	80.0 - 120	Acceptable		
9RHHC	3	0.0868	0.0883	%	98.4	80.0 - 120	Acceptable		
THCA	1	0.0311	0.0303	%	103	90.0 - 110	Acceptable		
CBDA	2	0.0329	0.0336	%	98.0	80.0 - 120	Acceptable		
CBDA	2	0.0329	0.0336	%	97.9	80.0 - 120	Acceptable		
deltaTHCP	2	0.0325	0.0331	%	98.2	80.0 - 120	Acceptable		
deltaTHCO	3	0.0340	0.0334	%	102	80.0 - 120	Acceptable		
CBF	2	0.0333	0.0337	%	98.7	80.0 - 120	Acceptable		
deltaTHCO	3	0.0326	0.0329	%	99.2	80.0 - 120	Acceptable		

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBE	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBG	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBG	<LOQ	0.00316	%	< 0.00316	Acceptable	
THCV	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHCV	<LOQ	0.00316	%	< 0.00316	Acceptable	
THCVA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBN	<LOQ	0.00316	%	< 0.00316	Acceptable	
exo-THC	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
9SdeltaTHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBL	<LOQ	0.00316	%	< 0.00316	Acceptable	
9SHHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
9RdeltaTHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBE	<LOQ	0.00316	%	< 0.00316	Acceptable	
9RHHC	<LOQ	0.00316	%	< 0.00316	Acceptable	
THCA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBDA	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHCP	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHCO	<LOQ	0.00316	%	< 0.00316	Acceptable	
CBF	<LOQ	0.00316	%	< 0.00316	Acceptable	
deltaTHCO	<LOQ	0.00316	%	< 0.00316	Acceptable	

Abbreviations

ND - None Detected at or above MRL
RPD - Relative Percent Difference
LOQ - Limit of Quantitation

Units of Measure:

% - Percent



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Revision: 4 Document ID: 7148
 Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V986		Batch ID: 2312958						
Sample Duplicate		Sample ID: 23-0132800002						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDA	0.0111	0.0113	0.00318	%	1.27	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBDA	0.0215	0.0211	0.00318	%	1.78	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBG	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBN	0.00674	0.00622	0.00318	%	8.09	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
d8THC	0.650	0.621	0.00318	%	4.70	< 20	Acceptable	
9Sd10THC	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
9SHHC	0.0800	0.0791	0.00318	%	1.11	< 20	Acceptable	
9Rd10THC	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
9RHHC	0.199	0.194	0.00318	%	2.44	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
d9THCP	0.0168	0.0172	0.00318	%	2.75	< 20	Acceptable	
d8THCO	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	
d9THCO	<LOQ	<LOQ	0.00318	%	NA	< 20	Acceptable	

Abbreviations

ND - None Detected at or above MRL
 RPD - Relative Percent Difference
 LOQ - Limit of Quantitation

Units of Measure:

% - Percent



12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49





12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013431/D002.R000
Report Date: 11/21/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/14/23 11:49

Explanation of QC Flag Comments:

Code	Explanation
Q	Matrix interferences affecting spike or surrogate recoveries.
Q1	Quality control result biased high. Only non-detect samples reported.
Q2	Quality control outside QC limits. Data considered estimate.
Q3	Sample concentration greater than four times the amount spiked.
Q4	Non-homogenous sample matrix, affecting RPD result and/or % recoveries.
Q5	Spike results above calibration curve.
Q6	Quality control outside QC limits. Data acceptable based on remaining QC.
R	Relative percent difference (RPD) outside control limit.
R1	RPD non-calculable, as sample or duplicate results are less than five times the LOQ.
R2	Sample replicates RPD non-calculable, as only one replicate is within the analytical range.
LOQ1	Quantitation level raised due to low sample volume and/or dilution.
LOQ2	Quantitation level raised due to matrix interference.
B	Analyte detected in method blank, but not in associated samples.
B1	The sample concentration is greater than 5 times the blank concentration.
B2	The sample concentration is less than 5 times the blank concentration.